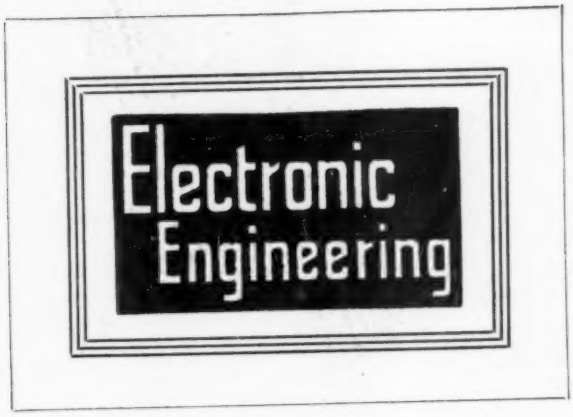

28 ESSEX STREET · STRAND · LONDON · W.C.2.

INDEX
VOLUME 37
1965

INDEX

January to December

1965

Page

A

A.D.F., A Solid State 811
Aerial, A New Microwave Link 79
Aerials, The Power Gain of Arrays of Yagi, by P. Knight and R. D. C. Thoday 91
Amplifier, An Electron Current for Use with an Electron Microprobe Scanning System, by J. P. Davey .. 236
Amplifier Covering a Wide Dynamic Range, A Constant Volume, by A. G. Morris 502
Amplifier Design with a Digital Computer, by J. R. Abrahams 740
Amplifiers Employing Tunnel Diodes, The Performance and Limitations of Low-Level, by B. Easter .. 520
Amplifier for a Radiometric Application, A Nitrogen-cooled Degenerate Parametric, by D. Chakraborty and G. F. D. Millward 532
Amplifier for Communal Television Distribution, A Four-Output Transistorized, ... 591
Amplifier Stage, Gain and Cut-off Frequency of a Transistor, by S. Turk 609
Amplifier Using Field Effect Transistors, A D.C. Preferential, by J. C. S. Richards 598
Amplifier with Crossover Feedback, An A.F., by A. R. Bailey 818
Amplifier with Linear Voltage Controlled Gain, An, by C. I. Sach 375
Amplifier with Quick Recovery, A Video Logarithmic, by G. Kossoff, C. N. Liu and D. E. Robinson .. 306
Amplifier with Unity Voltage Gain, A D.C., by G. G. Bloodworth 112
(Letters to the Editor) 338
Amplifiers, Field Effect Transistors for Biological, by R. E. Webb 803
Automatic Gain Control for Noise, by J. S. Bowman and H. Sutcliffe 529

B

Baluns for High Powers, The Design of H. F., by J. Wood 164
BOOK REVIEWS .. 50, 122, 191, 265, 335, 406, 476, 548, 615, 689, 760, 832

Absolute Stability of Regulator Systems 617
Advances in Control System, Vol. 1 761
Advances in Cryogenic Engineering 691
Advances in Electronic Packaging, Vol. 5 761
American Microelectronics Data Annual, 1964-65 266
Analogue and Digital Computer Methods 51
Analogue Computing for Beginners 337
Analysis Instrumentation, 1964 337
Annual Review in Automatic Programming, Vol. 4 123
Automatic and Remote Control 549
Basic Electronic Circuits 265
Basic Theory of Space Communications 760
Batteries 2 833
Beama Directory, 1964-1965, The 193
Biological Effects of Magnetic Fields 760
Brimar Valve Manual, No. 10 617
British Special Quality Valves and Electron Tube Devices Data Annual 266
Catalogue of Normalized Low-Pass Filter Transfer Functions with Pulse Response and Damping according to Chebyshev (in German) 51
Circuits with Periodically Varying Parameters including Modulators and Parametric Amplifiers 192
Cold Cathode Tube Circuit Design 266
Collision Phenomena in Ionized Gases 122
Communication Nets Stochastic Message Flow and Delay 335
Computer and Information Sciences 617

Page

Computer Applications, 1962 193
Computer Augmentation of Human Reasoning 617
Computing Methods 476
Computing Methods in Optimization Problems 51
Conference Proceedings, Vol. 26, Pt. 1, 1964 Fall Joint Computer Conference 407
Conference Proceedings, Vols. 24 and 25 337
Data Acquisition and Processing in Biology and Medicine, Vol. 3 193
Data Transmission 689
Data Smoothing and Prediction in Theory and Practice 832
Design and Use of Electronic Analogue Computers, The 476
Design of Low-Noise Transistor Input Circuits 193
Design Theory and Data for Electrical Filters 689
Dictionnaire Anglais-Francais L'Electrotechnique L'Electronique .. 477
Dictionary of Data Processing 336
Dictionary of Electrical Engineering, Vol. 1, German-English-French 617
Dictionary of Electronics, Communications and Electrical Engineering, Vol. 2 337
Dielectrics 51
Digest of Literature on Dielectrics, Vol. 27, 1963 407
Digital Computer Applications to Process Control 833
Digital Computer, The 267
Digital Computers in Action 617
Digital Instruments 549
Dynamic Circuit Theory 615
Determination of the Time Position of Pulses in the Presence of Noise, The 617
Electrical Circuits Including Machines 51
Electrical Interference 193
Electricity and Magnetism 689
Elementary Circuit Properties of Transistors 549
Elements of Pulse Techniques 191
Elements of Transistor Pulse Circuits 691
Electromagnetic Aspects of Hypersonic Flight 407
Electron in Electronics, The 617
Electronic Amplifiers for Automation Compensators 548
Electronic and Hybrid Computers 406
Electronic Equipment in Industry 549
Electronic Organ for the Home Constructor, An 193
Electronic Precision Measurement Techniques and Experiments .. 192
Electronic Transformers 690
Electronics and Instrumentation 50
Electronics Data Handbook 477
Electronics of Solids 833
European Miniature Electronic Components and Assemblies Data, Part 1, 1965-66 407
European Miniature Electronic Components and Assemblies Data, Part 2 761
Excitation Control 267
Explosion Proof Electrical Equipment 617
Field Effect Transistor Applications 265
First International Conference on Electron and Ion Beam Science and Technology 691
Fundamentals and Components of Electronics Digital Computers 193
Fundamentals of Relay Circuit Design 616
Fundamentals of Transmission Electron Microscopy 122
General Principles of Automation 616
German-English Electronics Dictionary 617
Goonhilly Project, The 407
Guidé Technique De L'Electronique Professionnelle, 2 Vols. .. 266
Guide to Advanced Electrical Engineering, A 267
Guide to Radio Technique, Vol. 1 691
Handbook of Electron Beam Welding 407
Handbook of Electron Tube and Vacuum Techniques 549
High-Intensity Ultrasonics Industrial Applications 477
High Power Microwave Electronics 617
Humidity and Moisture, Vol. 2—Applications 477
Impedance Investigations on Wide-band Screened Spiral Slot Aerials in the S.H.F. and E.H.F. Ranges (in German) .. 477
Industrial Electronics Measurement 267
Industrial Isotope Techniques 477
Infra-red and its Thermal Applications 193
Instrumentation Techniques in Nuclear Pulse Analysis 123
Instruments Electronics Automation Year Book and Buyers' Guide 407
International Telemetering Conference 1965 Washington D.C., Vol. 1 691
Introduction to Electronics 549
Introduction to Fortran 193
Introduction to Microwave Theory and Measurements 191
Introduction to Numerical Control of Machine Tools, An .. 335

Page

Introduction to Semiconductor Devices .. 50
Introduction to Semiconductor Physics .. 335
Introduction to the Mathematical Formulation of Self-Organizing Systems, An .. 337
Introductory Course for Electrical Technicians, An .. 267
Investigations in the Field of Practical Mathematics (in German) .. 407
Ionized Gases .. 337
Lectures on Magnetoionic Theory .. 336
Linear Analysis of Electronic Circuits .. 548
Masurari Electronice in Industrie .. 267
Mathematical Analysis of Observations .. 760
Methematical Methods in Reliability Engineering .. 192
Mathematics and Computer Science in Biology and Medicine .. 761
Matrices (in German) .. 123
Matrix Algebra for Electronic Engineers .. 691
Mechanization and Automation in Radio-Component Manufacture 477
Medical Electronics .. 691
Michael Faraday .. 832
Microwave Circuits .. 615
Microwave Tubes .. 833
Modern Control Theory .. 266
Modern Digital Circuits .. 267
Mossbauer Effect: Principles and Applications .. 617
Nonlinear and Parametric, Phenomena in Radio Engineering .. 337
Nonlinear-Magnetic Control Devices .. 406
Optoelectronic Devices and Circuits .. 267
Paramagnetic Resonance, Vols. 1 and 2 .. 51
Pathfinder, A .. 617
Photoelectric Effects in Semiconductors .. 406
Photoelectric Materials and Devices .. 761
Physical Basis of Electronics, The .. 548
Physical Electronics .. 50
Physics of Magnetism .. 476
Physics of Semiconductors .. 123
Physics of III-V Compounds .. 192
Plasma Physics .. 691
Potential Barriers in Semiconductors .. 549
Power Travelling Wave Tubes .. 549
Practical Oscilloscope Handbook .. 336
Preparation and Production of Technical Handbooks, The .. 477
Principles and Methods of Measuring Humidity in Gases, Vol. 1 407
Principles of Electron Tubes .. 616
Principles of Inverter Circuits .. 615
Principles of Transistor Circuits .. 407
Probability and Information Theory with Applications to Radar 336
Problems in Electrical Engineering for Technical Students .. 690
Problems in Electronics with Solutions Fourth Edition .. 617
Proceedings of the American Documentation Institute, Vol. 1 .. 337
Proceedings of the Conference on Signal Recording on Moving Magnetic Media .. 337
Proceedings of the International Conference of Magnetism .. 691
Proceedings of the International Council of the Aeronautical Sciences .. 549
Progress in Dielectrics, Vol. 6 .. 549
Pulse Technology .. 192
Quantitative Linquistics .. 336
Quantam Electron Theory of Amorphous Conductors .. 690
Radiation and Noise in Quantam Electronics .. 122
Radio Amateur's Handbook 42nd Edition, The .. 407
Radio Receiver Design, Part 1 .. 407
Radio Wave Propagation V.H.F. and Above .. 336
RCA Receiving Tube Manual .. 267
Recent Advances in Selenium Physics .. 761
Recognition: A Study in the Philosophy of Artificial Intelligence 477
Reliability Engineering for Electronic Systems .. 193
Semiconductor Network Analysis and Design .. 265
Semiconductors .. 51
Sensitivity Analysis of Dynamic Systems .. 193
Servomechanism Fundamentals and Experiments .. 51
Signal Flow Analysis .. 617
Solar Plasma Geomagnetism and Aurora .. 336
Solar System Radio Astronomy .. 617
Solid Circuits and Microminiaturization .. 193
Soviet Research in New Semiconductor Materials .. 691
Space-Age Acronyms .. 337
Statistical Dynamics of Linear Automatic Control Systems .. 691
Stereophonic Hearing Biological Periodicity as Self-excited Oscillation, On (in German) .. 123
Stromversorgung Elektronischer Schaltungen und Gerate .. 191
Structural Synthesis of High-Accuracy Automatic Control Systems 691
Television Engineering: Television Electronics .. 407
Tensor Analysis of Networks .. 337
Theory of Sampled Data Control System .. 833
Thrusters and Sleepers .. 407
Topology and Matrices in Solution of Networks .. 833
Transistor Bandpass Amplifiers .. 266
Transistor Circuits .. 193
Transistor Circuits in Electronics .. 335
Transistor Electronic Organs for the Amateur .. 691
Transistor, The .. 477
Transistors Applied .. 617
Traveling Wave Antennas .. 690
Unified Circuit Theory in Electronics and Engineering Analysis .. 616
Use of Ferrites at Microwave Frequencies, The .. 50
Variational Techniques in Electromagnetism .. 549
Vocabolario Di Televisione .. 267
Worked Examples in Advanced Electrical Engineering .. 267
Worked Examples in Alternating Current for Engineering Students 267
Worked Examples in Direct Current for Engineering Students .. 549
Worked Examples in Electronics and Telecommunications, Vol. 1 and 2 .. 477

C

Capacitors with Thin Oxide Film Dielectrics, by B. Walton 384
Channel Electron Multiplier, The, by J. Adams and B. W. Manley .. 180
Choke-Zener Diode Filter Circuit, The, by J. M. Diamond 822
Choppers, Single and Matched Pair Transistor, by A. Lyden .. 186
Circulator for Satellite Communications, A Cryogenic, 611
Communications Equipment, Military .. 507
Communication Equipment, New .. 717

Page

Communications for North Sea Oil Rigs .. 189
Communications System, A Single Sideband Automatic 296
Complementary-Pair Cascode for H.F. Amplification, A, by M. D. Wood .. 110
Computer, A Small Size .. 802
Computer, An Educational .. 105
Computer Arithmetic and Control Sections, A Small Transistorized Digital, by A. D. Booth and K. Cameron .. 368
Computer Read-out by Television .. 395
Control of Water Supply by Digital Telemetry, Automatic .. 651
Controller, A Direct Digital .. 224
Convertor, A Stable Frequency D.C. to A.C., by G. Smiljanic .. 610
Co-Ordinate Measuring Equipment Using Moire Fringes, An Automatic, by R. L. Farrel and G. E. Moore 644
Counter, A Step-by-Step Design of a Two-Way Binary, D. Zissos .. 311
(Letters to the Editor) .. 546
Counter for Measuring Alpha Particles, Three-Channel Low Speed, by P. B. Roberts .. 784
Counter with D.C. Logic Reset, a Reversible Decade, by J. H. Smith .. 41
Counter with Symmetrical 1242 Coding, A Reversible Decade, by I. Scollar .. 468
(Letters to the Editor) .. 686
Counters and Shift Registers Using Static Switching Units, by J. F. Young .. 161
(Letters to the Editor) .. 404
Cryomagnetic Laboratory, The Mullard .. 519
Curvature Attachment for a Surface Finish Instrument, by B. B. Trott .. 388
COMMENTARIES .. 1, 73, 145, 217, 289, 363, 431, 501 573, 643, 713

D

Data Acquisition System, An Airborne .. 160
Data Display for Air Traffic Control, Electronic .. 535
Data Logger System, A Marine .. 328
Data Transmission for Motorway Control .. 611
Dekatron Valve Controlled by a Magnetic Field, Operation of a, A. W. Gooder and M. H. N. Potok 318
Delay Device and A.C. Logic Switch in the Resistor-Capacitor-Coupled-Transistor-Logic, A, by G. Philokyprou .. 601
Diesel Engine Test Plant .. 160
Distortion and Power Output of Pulse Duration Modulated Amplifiers, by E. C. Bell and T. Sergent 540
(Letters to the Editor) .. 829
Divider, A Transistorized Analogue, by G. Gooberman and B. Jones .. 259
Division Circuits by Variable Time Scale, Elimination of, by D. K. Taylor .. 334
Door-Bell for the Deaf-Blind, A .. 40
Draughting Machine, A Numerically Controlled .. 680

E

'Early Bird' Satellite and Goonhilly Downs Earth Station, The .. 396
Electrocardio Transmitter and Receiver, A Portable, by A. R. Atkins and E. B. Lock .. 806
Extremum Seeker, A Simple Automatic, by P. Zorkoczy 178
Eye Movement Recording .. 109
ELECTRONIC EQUIPMENT .. 52, 124, 196, 268, 340, 408, 478, 550, 620, 692, 762, 834
(Including Exhibition Reviews)

Accelerometers .. 52
Adaptors, Coaxial .. 129
Amplifier and Indicator, Millivolt .. 763
Amplifier, Frequency Selective .. 272
Amplifier, Integrated D.C. .. 197
Amplifier, Operational .. 57, 478
Amplifier, Pulse .. 200
Amplifier, Six Channel .. 129
Amplifiers, Printed Circuit Motor .. 270
Amplifiers, Selective .. 767
Analyser, Bearing .. 550
Analyser, Impact Noise .. 625
Analyser, Oxygen .. 340
Analyser, Spectrum .. 199
Analyser, 100-Channel .. 551
Attenuator, Automatic .. 57
Binding Tool, Cable .. 697
Boards, Plug-in Components .. 271
Bridge, High Precision Resistance .. 412
Bridge, Precision R.F. .. 623
Bridge, Push-Button .. 837
Bridge, Resistivity .. 835
Bridge, Strain Measuring .. 196
Bridge, Universal .. 555
Capacitor, Decade Mica .. 201
Capacitor, Metallized Polyester .. 695
Capacitors, Ceramic Disk .. 837
Capacitors, Miniature Electrotytic .. 411

Page

Capacitors, Piston Trimmer .. 196
Capacitors, Silicone Rubber Encapsulated .. 692
Capacitors, Silvered Mica .. 837
Circulator, Miniature X-Band .. 555
Cleaner, Ultrasonic .. 273
Clock, Electrical Stop .. 128
Clocks, Digital .. 342
Comparator, A.C.-D.C. .. 53
Comparator, Digital Servo .. 126
Computer, Transformer Ratio Analogue .. 342
Connector, Integrated Circuit .. 694
Connector, Subminiature Coaxial Cable .. 342
Connectors, Edge .. 271, 620
Connectors, Industrial .. 125
Controller and Indicator, Temperature .. 201
Controller, Automatic Power .. 57
Controller Frequency .. 481
Controllers, Temperature .. 127, 411, 766
Control, Unit, Response .. 762
Convertor, Analogue Digital .. 273
Convertor, Waveform .. 835
Counter, Batching .. 127
Counter, Digital .. 834
Counter, Frequency .. 53
Counter Probe .. 622
Counter-Timer .. 272, 625
Counters, Electronic .. 838
Counters, Photo-Electric .. 408
Counter-Timer, Batch .. 620
Delay Line Stores .. 54
Detector, Ultrasonic Flaw .. 273, 342
Dewpoint Indicator, Automatic .. 268
Digitizer, Optical Pulse .. 554
Digitizers, Reversible Decimal .. 837
Display, Miniature Digital .. 624
Diodes, Microwave Tunnel .. 836
Divider, Potential .. 197
Divider Unit, 100Mc/s .. 340
Drills for Printed Circuits .. 482
Drill, Printed Circuit .. 343
Elements, Logical Circuit .. 199
Erosion Machine, Micro .. 408
Evaporation Source .. 199
Extensometer, Recording .. 344
Ferrite Pot Cores .. 55
Ferrite, Ring Cores .. 838
Filter-Phase Shifter .. 836
Frequency Standard .. 620
Gauge, Portable Thickness .. 273
Gauge, Temperature .. 272
Gaussmeter, Portable .. 483
Generator, Digital Word .. 483
Generator, Double Pulse .. 268, 479
Generator, Pulse .. 343
Generator, Pulse Time .. 198
Generator, R.F. Signal .. 269
Generator, Self-Tuning Ultrasonic .. 128
Generator, V.L.F. .. 345
Heat Sinks .. 623
Impedance Changing Probe .. 693
Indicator/Controller, Level .. 695
Indicator, Hours Run .. 55
Indicators, Audible .. 125
Indicators, Digital .. 620
Indicators, Micro .. 53
Insert, Dry Reed .. 345
Instruments, 'Teaching' .. 341
Invertors, Static .. 409
Isolators, Ferrite .. 345
Jacks, Printed Circuit Test .. 624
Laser, Demountable D.C. Gas .. 482
Laser, Gas .. 413
Level Measuring Set .. 834
Logger, Data .. 837
Logging-Recording Equipment, Data .. 479
Logic Elements, Reed .. 550
Magnets, Standard Reference .. 624
Marking System, Cable .. 694
Measuring Instrument System .. 200
Measuring Set, Conductivity .. 621
Meter, Digital Frequency .. 56
Meter, Distortion Factor .. 554
Meter, Elapsed Time .. 343
Meter, Multi-Range .. 621, 624
Meter, Percentage Ratio .. 480
Meter, Sound Level .. 269
Meter Unit .. 200
Meters, Miniature Panel .. 411
Microswitch .. 766
Microswitches .. 838
Microvoltmeter, A.C. .. 479
Microwave Equipment .. 480
Millivoltmeter .. 344
Millivoltmeter, A.F. .. 341
Modules, Circuit .. 480
Monitor, Mains Voltage .. 621
Monitor, R.F. Power .. 552
Monitor, Surface Profile .. 479
Motor, Low-Speed Synchronous .. 766
Motor, Miniature D.C. .. 410
Noise Measuring Set, Television .. 836
Oscillator and Level Measuring Set .. 692
Oscillator, Audio Sweep .. 198
Oscillator, High Power Audio .. 411
Oscillator, Variable Phase .. 125
Oscillator, Wide Range .. 694
Oscilloscope .. 552
Oscilloscope, Double Beam .. 839
Oscilloscope, Dual Trace .. 762
Oscilloscope, High Speed Storage .. 839
Oscilloscope Units .. 340
Phase Attachment, Variable .. 341
Photo-Choppers .. 834
Photocell and Projector Heads .. 695
Plugs and Sockets, Multiple .. 482
Potentiometer, Digital .. 124
Potentiometer, Miniature Preset .. 127

Page

Potentiometer, Miniature Wirewound .. 625
Potentiometer, Precision .. 764
Potentiometers, Multi-Gang .. 409
Power Supplies .. 345
Power Supplies, Stabilized .. 765
Power Supply, E.H.T. .. 837
Power Supply, 400 c/s .. 125
Power Supply, Heavy Duty .. 555
Power Supply, Stabilized .. 124, 413
Power Supply, Teleprinter .. 200
Power Supply, Tunnel Diode .. 56
Power Unit, Transistorized .. 621
Printed Circuit Boards .. 693
Printed Circuit Master Grid .. 553
Printed Circuit Test Panels .. 835
Projector, Graticule .. 483
Protection Unit, Receiver .. 553
Rack Units, Modular .. 197
Reader, Digital Meter .. 410
Receiver, Communications .. 764
Receiver, V.H.F.-U.H.F. .. 129
Receiving Terminal, Dual Diversity .. 696
Recorder, Chart .. 838
Recorder, Delay Loop .. 53
Recorder, Instrumentation Tape .. 268
Recorder, Six Channel Chart .. 763
Recorder, Two-Pen X-Y .. 694
Recording Head, Multi-Track .. 197
Recording Head, Seven Track .. 622
Registration Devices .. 621
Relay, Miniature Latching .. 481
Relay, Photo .. 409
Relays and Timers, Solid State .. 343
Relays, Heavy Duty .. 201
Relay, Heavy Duty .. 765
Relays, Microswitch .. 482
Relays, Miniature .. 554
Relays, Plug-In .. 128
Resistor, Variable .. 412
Resolvers, Feedback .. 125
Sampling Changer, Automatic .. 199
Sensing Units, Inductive .. 270
Servo System, Instructional .. 52, 413
Slip Rings, Miniature .. 838
Spectrometer, Nuclear Quadrupole Resonance .. 124
Strippers, Wire .. 697
Superconducting Solenoid Systems .. 762
Switch, Low Noise Reed .. 696
Switch Module, Stepping .. 478
Switch, Programming .. 696
Switch, Push-Button .. 834
Switch, Rotary .. 766
Switch, Rotary Sampling .. 269
Switch, Waveguide .. 56
Switches, Dry Reed .. 270
Switches, Lever .. 693
Switches, Pressure .. 763
Switches, Printed Circuit Push-Button .. 622
Switches, Push-Button .. 481
Switches, Rotary Reed .. 408
Switches, Rotary Selector .. 693
Switches, Sub-Miniature Reed .. 127
Switches, Thumbwheel .. 763
Tacho-Ratiometers .. 696
Tape Comparator .. 765
Tape Punch, Paper .. 695
Tape Reader, Photo-Electric .. 762
Tape Transport, Digital .. 52
Telephone Set Test Equipment .. 697
Television Camera, Miniature .. 344
Terminal Pin .. 836
Terminal Pins .. 271
Test Chambers, Temperature Environmental .. 126
Test Probe, Semiconductor .. 126
Test Set, A.C.-D.C. .. 54
Test Set, Acoustic .. 835
Test Set, Eddy Current .. 196
Test Set, Telephone Cable .. 551
Test Set, White Noise .. 55
Tester, Materials .. 480
Tester, Semiconductor .. 767
Tester, Transistor .. 409
Thermometers, Digital .. 553
Thermometer, Electronic .. 767
Thermo-Probe .. 55
Thyristor Drive Module .. 54
Thyristor Trigger Control Units .. 269
Thyristors .. 198
Timer-Counter .. 197
Timer, Electronic .. 408
Timer, Industrial .. 839
Timers, Electronic .. 552, 624
Timers, Process .. 57, 272, 692
Timing Units .. 697
Tools, Relay Inspection .. 478
Torque Sensing Platform .. 126
Tracer, Transistor Curve .. 555
Transducer, Miniature Magnetic .. 56
Transducer, Pressure .. 129
Transducers, Displacement .. 765
Transducers, Pressure .. 201, 344, 623
Transducers, Torque .. 127
Transformers, Miniature .. 270
Transmission Line, Artificial .. 340
Transmitter-Receiver, V.H.F. .. 554
Travelling Wave Tubes, High Power .. 196
T.R. Cell, Primerless .. 478
Trolley, Oscilloscope .. 409
Trunking, Cable .. 478
Ultrasonic Cleaning Equipment .. 553
Uniselectors, Reed .. 767
Varactors, High Q Tuning .. 128
Vibration, Exciters .. 695
Vibration Measuring Equipment .. 483
Vidicons, High Resolution .. 345
Voltmeter, A.C.-D.C. Digital .. 410
Voltmeter, Digital .. 550, 551

Page

Voltmeter, Heterodyne 412
Voltmeters, Digital 552, 622
Wire Cutter and Stripper 552

F

Fading Machine for the Simulation of the Ionosphere, by D. Beck, J. A. Betts 74
Feedback and Noise Performance, by R. E. Bogner .. 115
Field-Effect Transistor Used as a Low-Level Chopper, The, by K. Barton 80
Field Effect Transistors in D.C. Amplifiers, J. C. S. Richards 302
Filters, High Stability Low Frequency Band-Pass, by P. G. Simpson 26
Flight Data Recorder, A New 588
Forecasting and Stock Control, An Analogue Computer for, R. Calvert and J. Mildwater 660
Fourier Synthesizer Based on the Emitter Coupled Multivibrator, A New, by A. D. Bond 245
Frequency Changer for High Speed Counters, A, by P. Adby and E. A. Adis 796
Frequency Divider with a Variable Division Ratio, A Microelectronic, by B. Preston 240
Frequency Source, A Standard, by S. J. Cotton 380
FRENCH .. 59, 131, 203, 275, 349, 417, 487, 559, 629, 699, 769, 841
(Electronic Equipment and Summaries)

G

Generator, A Precision Three-Phase 400c/s, by D. J. Miles 736
Generator using Switched Thyratrons, A High Voltage Pulse, by T. Chan and M. W. Gunn 401
(Letters to the Editor) 619
Gradient Controller for Agricultural Drain Laying Machines, A Light Operated, by G. O. Harries and D. J. Perkins 364
Graphic-Analogue to Digital Convertor, by R. L. G. Gilbert and N. S. Oakey 98
Gun Effect Epitaxial Device for Microwave Applications, A 597
GERMAN .. 66, 138, 210, 282, 356, 424, 494, 566, 636, 706, 776, 848
(Electronic Equipment and Summaries)

H

Heart Beat Monitor, A Portable 239

I

Impedance Matrix of a Complicated Linear Network, The Determination of the, by W. A. Crabbe 752
Inertial Navigation for Civil Airliners 792
Information Storage in Magnetic Memories, Applications of, by D. M. Bernstein 398
Integrated Circuit Hearing-aid, An 101
Integrator, A Transistorized, by J. A. Effenberger and R. Steele 230
Integrator Gain, Dynamic Calibration of Electronic, by D. K. Taylor 190
Interpolated Data and Speech Transmission System, An 545
Invertor, A 12V d.c. to 230V a.c. Silicon Controlled Rectifier, by D. I. Ross, and B. E. G. Goodger .. 589
Invertor for Mains Frequency Operation, A 1kW, by W. D. Gilmour 727

J

Jupiter, Radio Emissions from 14

L

Laddic in All-Magnetic Logic Circuits, The, by D. J. Morris 290
(Letters to the Editor) 475
Logical Circuits, The Design of Minimal NOR/NAND, by D. Zissos and G. W. Copperwhite 592
(Letters to the Editor) 829
LOPAD, A Logarithmic On-Line Processing System for Analogue Data, by T. K. Cowell and M. Gordon 146
LETTERS TO THE EDITOR .. 49, 120, 264, 338, 404, 475, 546, 618, 686, 757, 829

Amplifier with Unity Voltage Gain, A D.C. 338
Amplifiers, D.C. 264, 619
Counter, A Reversible Decade 686
Counter, A Step-by-Step Design of a Two Way Binary 546
Counters and Shift Registers Using Static Switching Units ... 404
Cyclic Code Generators, The Synthesis of 339
Electrometer-Amplifier, A Transistorized 758
Generator, An Exponential Pulse 759
Generator, A Transistor Linear Ramp 619
Generator Using Switched Thyratrons, A High Voltage Pulse .. 619
Impedance Convertor, A Direct Coupled Negative 264
Integrator, A Novel 121, 264

Page

Laddic in All-Magnetic Logic Circuits, The 475
Matrix Analysis 475
Multivibrator Circuits, Frequency Control of Astable Transistor .. 405
Networks, Simple Tuneable RC Null 120
N.I.C., A Direct Coupled 546
NOR/NAND Circuits 829
Oscillators, Feedback Transistor 404, 547
Photomultiplier Fatigue 120, 339
Probability Density Function Measurement 829
Probability Density Function Measurement, A Technique for .. 618
Pulse Modulated Amplifiers 829
Revolution Counter and Frequency Meter, An L.F. 121
Sensor for A.C. Power Failures, A Fast Relay 618
Servo System Using Stepping Motors, A Velocity Controlled .. 686
Signal Flow Graphs 49
Transistor Circuits 757
Transistor Tester, A 618
U.J.T. as a Controlled Resistance, The 405
Voltage Level Detector, D.C. 688

M

Magnetic Testing, A Bridged-T Network for A.C., by S. N. Bhattacharyya and J. K. Choudhury .. 674
Magnetometer, A Rock-Generator, by P. I. Ghelfan .. 248
Mast Nears Completion, Emley Moor 436
Meander Line Aerial, The, by T. S. M. Maclean 667
Metal-Oxide-Semiconductor Transistor, The, by R. A. Hilbourne and J. F. Miles 156
M.H.D. Power Generation, Experiments in, by G. J. Womack 7
Milling Machines, Numerically Controlled 669
Multi-Aperture Devices for All-Magnetic Logic Applications, D. J. Morris 512
Multiple Mesh Problems, An Iterative Method of Solving, by N. M. Morris 745
Multiplier for Digital Phase Measurement, A Pulse Frequency, by L. Molyneux 392
Multivibrator Circuits, Frequency Control of Astable Transistor, by S. L. Hurst, C. L. Seal 182
(Letters to the Editor) 405
Multivibrator with Square BH Loop Cores, Operation of a Magnetically Coupled, by G. Smiljanic .. 44
Multivibrators for Use with General Purpose Logic Elements, Transistor Astable, by G. H. Stearman 812
Multivibrators, Zero Phase-Shift, by A. Pugh 24
MEETINGS THIS MONTH .. 58, 130, 202, 274, 698, 768, 840

N

Navigation Systems, Helicopter 255
Navigator, A New Doppler 474
Network Frequency Response, Automatic Solution of, by T. Fleetwood 612
Neurophysiological Computer, A, by B. Delisle Burns, W. Ferch and G. Mandl 20
Noise Generator, A Low-Frequency Pseudo-Random, by C. Kramer 465

O

Oscillators, Distortion in Feedback, by P. F. Ridler .. 604
Oscillators, Microwave Tunnel-Diode, by J. Swift .. 508

P

Phase-Sensitive Detector, A Diode, by B. S. Leela and R. Shankar 681
Pencil Follower Trace Analyser, A 531
Photoelectric Measurements, Improved Technique for, by M. D. Matthews, E. A. Faulkner and G. W. Green 472
Photo-Electric Monitoring for Car Washing 808
Piezoelectric Ceramics, High Voltage Generation from, by C. Pearcy 656
Post Deflexion Acceleration Used in Instrument Cathode-Ray Tubes, A Review of Methods of, by K. J. Ming 94
Potentiometer for Use in the 100c/s to 10kc/s Range, A Self-Checking Cartesian A.C., by E. R. Wigan .. 442
Power Supply, Negative Output Resistance in a Regulated Power Supply, by J. Diamond 749
Pre-Regulator for a Transistorized Power Supply, An S.C.R. by D. Ophir 36
Printed-Circuit Boards Tested Automatically 817
Probability Density Function Measurement, A Technique for, by P. N. Nikiforuk and G. Squires 316
(Letters to the Editor) 618, 829
Programmers, A Stepping Drum 31
Pulse Generator, A High Voltage, by I. M. Paz .. 252
Pulse Height Measuring Unit, A, by C. I. Sach 460
Pulse Modulator, Analysis of a, by J. Kontos 332
Pulse Height Monitor, A, by M. Bronzite 394

PUBLICATIONS RECEIVED .. 58, 130, 202, 274 689, 768, 840

Page

Q

Quantized Pulse Amplitude Modulation, A Transistorized Set for, by J. Karfunkel 324

R

Radar, A New Air Surveillance 464
Radar Displays, Daylight 229
Radar, High Reliability Marine 383
Radar System, A New Secondary 301
Radio-Telegraph Station, NATO High Power V.L.F. .. 89
Radiotelephone System, An Improved 323
Ratemeter/Integrator, The Harwell 2000 Series Linear, by J. W. H. Wilkins and D. J. Marsh 456
Ratemeter with 2μsec Resolution, A Transistor, by B. Shepherd 437
Ratio Amplifier Employing the Principle of Elapsed Time Computation, A Transistorized, by A. A. Cremin and M. C. Sexton 747
Rectifiers and Efficiency Diodes in Television Receivers, Solid State Devices for E.H.T., by F. D. Bate .. 169
Reduction of a Multi-Mesh Circuit to a Four-Terminal Network, Direct, by D. W. W. Rogers 678
Remote Control and Indication Equipment 173
Resistors for Use at High Voltages, Fixed, by P. L. Kirby 84
R.M.S. to Mean Convertor, An, H. H. A. Bath 321
Resistors, The Non-Linearity of Fixed, by P. L. Kirby .. 722

S

Scaler, A High Speed Tunnel Diode Decade, by M. N. S. Swamy 225
S.C.R. Firing Circuits, Improved, by D. Ciscato and L. Mariani 256
S.C.R. Motor Control 726
Seastations for Aircraft Communications 379
Semiconductor Light Source, A 101
Servo-Simulator, A Simple Transistor, by P. G. M. Dawe 326
Shot Noise and the Measurement of the Electron Charge, by E. Mathieson 718
Simulator for Naval Training 821
Sing-Around Velocimeter and its Use in Measuring the Size of Turbulent Eddies in the Sea, The, by D. J. Dunn 432
Singing Blackboard, A 659
Solarimeter for Horticulture, An Integrating 367
Spectrometer, A New Mass 753
Spectrum Analyser and Sweep Generator, An X-Band, by R. W. Eldred 2
Speed Indicating Equipment for Railways, Electronic .. 579
Square Law Current Control System, A, by C. I. Sach 580
Stabilization of D.C. Motors, Sampling System for High Degree, by F. Szlavik and Gy. Orban 536
Stabilization Using Cold Cathode Trigger Tubes, Voltage, by E. P. T. Atkinson and C. F. Hill 788
Staircase Function Generator, A, by A. Watson 329
Stimulator, A Crystal Controlled, by J. A. Reynolds .. 152
Stimulator, A Versatile Transistor, by W. J. Bannister and R. H. Kay 793
Stimulator for Physiological Purposes, A Two-Transistor, by J. Opalinski 670
Stimulus Isolation Unit for Use in Electrophysiology, A High-Efficiency R.F., by W. T. Catton and R. G. Farrier 828
Switch, A Transistorized High-Speed 97
Switch for Use in Isotope Research, A Repetitive Electronic, by E. van der S. Lotz 825
Switching Circuits, Direct-Coupled Silicon Transistor, by J. D. Martin 732
SHORT NEWS ITEMS .. 47, 118, 194, 262, 346, 414, 484, 556, 626, 684, 754, 830

T

Tachometer Using Circular Diffraction Gratings, A, by B. V. Jayawant and D. P. Rea 297
Take-Off and Overshoot Director System, A 683
Tape Transport System, A Pneumatic 251
Teaching Machine, A New Digital 391
Teaching Machines 315
Telephone Exchange Using Dry Reed Relays, A 387
Television Camera, A New 320
Television Camera for Education Use, A 608
Television for Pilot Training, Colour 739
Television, Reactor Inspection 19
Television Signal Generator, A Colour 46
Thermal Delay by New Circuit Principle, Improved, by J. E. Brooke-Stewart, G. F. Klepp 106
Time Division Multiplex System Using Pulse Amplitude Modulation Techniques, A Demonstration, by R. Barrett 174

Page

Time-Interval Display Using Transistor Circuits, A Reciprocal, by R. H. Kay 543
Track-Selection System for a Magnetic Drum Store, A, by S. C. Acharyya 102
Transfer Function Computer, A, by R. W. Levinge .. 218
Transformer with Low Earth Leakage Currents, An Input, by D. J. Wyatt 16
Transistor Analogue, A Large-Signal, by G. G. Bloodworth and D. N. Axford 450
Transistor Large Signal Current Gain Measuring Circuit with Digital Presentation, A Simple, by S. L. Hurst 524
Transistor Oscillators, Two Distinct Boundaries for Feedback, by B. Shahzadi 32
(Letters to the Editor) 404, 547
Transistors, Silicon Field-Effect, by R. Cullis 606
Transistor Tester, A, by M. M. Winn 234
(Letters to the Editor) 618
Tunnel Diode Quantizer, A, by R. V. L'Archeveque and B. McA. Sayers 574
Tunnel Diode Switching Circuits, The Design of Some, by R. V. L'Archeveque and B. McA. Sayers .. 652

V

Varistor Network as Analogue Computing Elements, by W. G. P. Lamb and M. L. Stones 809
Vibrator Installation, A New 805
Voltage and Earth Indicator for D.C. Supplies, A Combined, G. T. Edwards 34
Voltage Dependent Resistor Function Generator, Design Data for, by G. Brown and R. A. B. Bond .. 584

W

Weigher, An Automatic Tablet Check 467
White Noise Loading of Multi-Channel Communication Systems, by W. Oliver 714
Wien Bridge Oscillator, Harmonic Linearization of the by M. A. Kaaz 470

AUTHORS

A

Abrahams, J. R., Amplifier Design with a Digital Computer 740
Acharyya, S. C., A Track-Selection System for a Magnetic Drum Store 102
Adams, J. (with B. W. Manley), The Channel Electron Multiplier 180
Adby, P. (with E. A. Edis), A Frequency Changer for High Speed Counters 796
Atkins, A. R. (with E. B. Lock), A Portable Electrocardio Transmitter and Receiver 806
Atkinson, E. P. T. (with C. F. Hill), Voltage Stabilization Using Cold Cathode Trigger Tubes 788
Axford, D. N. (with G. G. Bloodworth), A Large-Signal Transistor Analogue 450

B

Bailey, A. R., An A.F. Power Amplifier with Crossover Feedback 818
Bannister, W. J. (with R. H. Kay), A Versatile Transistor Stimulator 793
Barrett, R., A Demonstration Time Division Multiplex System Using Pulse Amplitude Modulation Techniques 174
Bate, F. D., Solid State Devices for E.H.T. Rectifiers and Efficiency Diodes in Television Receivers .. 169
Bath, H. H. A., An R.M.S. to Mean Convertor 321
Barton, K., The Field-Effect Transistor Used as a Low-Level Chopper 80
Beck, D. (with J. A. Betts), Fading Machine for the Simulation of the Ionosphere 74
Bell, E. C. (with T. Sergent), Distortion and Power Output of Pulse Duration Modulated Amplifiers .. 540
(Letters to the Editor) 829
Bernstein, D. M., Applications of Information Storage in Magnetic Memories 398
Betts, J. A. (with D. Beck), Fading Machine for the Simulation of the Ionosphere 74
Bhattacharyya, S. N. (with J. K. Choudhury), A Bridged-T Network for A.C. Magnetic Testing 674
Bloodworth, G. G., A D.C. Amplifier with Unity Voltage Gain 112
(Letters to the Editor) 338
Bloodworth, G. G. (with D. N. Axford), A Large-Signal Transistor Analogue 450
Bogner, R. E., Feedback and Noise Performance .. 115

Page

Bond, A. D., A New Fourier Synthesizer Based on the Emitter Coupled Multivibrator 245
Bond, R. A. B. (with G. Brown), Design Data for Voltage Dependent Resistor Function Generators .. 584
Booth, A. D. (with K. Cameron), A Small Transistorized Digital Computer Arithmetic and Control Sections 368
Bowman, J. S. (with H. Sutcliffe), Automatic Gain Control for Noise 529
Bronzite, M., A Pulse Height Monitor 394
Brooke-Stewart, J. E. (with G. F. Klepp), Improved Thermal Delay by New Circuit Principle 106
Brown, G. (with R. A. B. Bond), Design Data for Voltage Dependent Resistor Function Generators .. 584
Burns, B. Delisle (with W. Ferch and G. Mandl), A Neurophysiological Computer 20

C

Calvert, R. (with J. Mildwater), An Analogue Computer for Forecasting and Stock Control 660
Cameron, K. (with A. D. Booth), A Small Transistorized Digital Computer Arithmetic and Control Sections 368
Catton, W. T. (with R. G. Farrier), A High-Efficiency R.F. Stimulus Isolation Unit for Use in Electrophysiology 828
Chakraborty, D. (with G. F. D. Millward), A Nitrogen-cooled Degenerate Parametric Amplifier for a Radiometric Application 532
Chan, T. (with M. W. Gunn), A High Voltage Pulse Generator Using Switched Thyratrons 401
(Letters to the Editor) 619
Choudhury, J. K. (with S. N. Bhattacharyya), A Bridged-T Network for A.C. Magnetic Testing 674
Ciscato, D. (with L. Mariani), Improved S.C.R. Firing Circuits 256
Copperwhite, G. W. (with D. Zissos), The Design of Minimal NOR/NAND Logical Circuits 592
Cotton, S. J., A Standard Frequency Source 380
Cowell, T. K. (with M. Gordon), LOPAD—A Logarithmic On-Line Processing System for Analogue Data 146
Crabbe, W. A., The Determination of the Impedance Matrix of a Complicated Linear Network .. 752
Cremin, A. A. (with M. C. Sexton), A Transistorized Ratio Amplifier Employing the Principle of Elapsed Time Computation 747
Cullis, R., Silicon Field-Effect Transistors 606

D

Davey, J. P., An Electron Current for use with an Electron Microprobe Scanning System 236
Dawe, P. G. M., A Simple Transistor Servo-Simulator 326
Diamond, J. M., The Choke-Zener Diode Filter Circuit 822
Diamond, J., Negative Output Resistance in a Regulated Power Supply 749
Dunn, D. J., The Sing-Around Velocimeter and its Use in Measuring the Size of Turbulent Eddies in the Sea 432

E

Easter, B., The Performance and Limitations of Low-Level Amplifiers Employing Tunnel Diodes .. 520
Edis, E. A. (with P. Adby), A Frequency Changer for High Speed Counters 796
Edwards, G. T., A Combined Voltage and Earth Indicator for D.C. Supplies 34
Effenberger, J. A. (with R. Steele), A Transistorized Integrator 230
Eldred, R. W., An X-Band Spectrum Analyser and Sweep Generator 2

F

Farrel, R. L. (with G. E. Moore), An Automatic Co-Ordinate Measuring Equipment Using Moire Fringes 644
Farrier, R. G. (with W. T. Catton), A High-Efficiency R.F. Stimulus Isolation Unit for Use in Electrophysiology 828
Faulkner, E. A. (with G. W. Green and M. D. Matthews), Improved Technique for Photoelectric Measurements 472
Ferch, W. (with G. Mandl and B. Delisle Burns), A Neurophysiological Computer 20
Fleetwood, T., Automatic Solution of Network Frequency Response 612

G

Ghelfan, P. I., A Rock-Generator Magnetometer .. 248
Gilbert, R. L. G. (with N. Oakey), A Graphic-Analogue to Digital Convertor 98

Page

Gilmour, W. D., A 1kW Invertor for Mains Frequency Operation 727
Gooberman, G. (with B. Jones), A Transistorized Analogue Divider 259
Gooder, A. W. (with M. H. N. Potok), Operation of a Dekatron Valve Controlled by a Magnetic Field 318
Goodger, B. E. G. (with D. I. Ross), A 12V d.c. to 230V a.c. Silicon Controlled Rectifier Invertor .. 589
Gordon, M. (with T. K. Cowell), LOPAD—A Logarithmic On-Line Processing System for Analogue Data 146
Green, G. W. (with M. D. Matthews and E. A. Faulkner), Improved Technique for Photoelectric Measurements 472
Gunn, M. W. (with T. Chan), A High Voltage Pulse Generator Using Switched Thyratrons 401
(Letters to the Editor) 619

H

Harries, G. O. (with D. J. Perkins), A Light Operated Gradient Controller for Agricultural Drain Laying Machines 364
Hilbourne, R. A. (with J. F. Miles), The Metal-Oxide Semiconductor Transistor 156
Hill, C. F. (with E. P. T. Atkinson), Voltage Stabilization Using Cold Cathode Trigger Tubes 788
Hurst, S. L., A Simple Transistor Large Signal Current Gain Measuring Circuit with Digital Presentation 524
Hurst, S. L. (with C. L. Seal), Frequency Control of Astable Transistor Multivibrator Circuits .. 182
(Letters to the Editor) 405

J

Jayawant, B. V. (with D. P. Rea), A Tachometer Using Circular Diffraction Gratings 297
Jones, B. (G. Gooberman), A Transistorized Analogue Divider 259

K

Kaaz, M. A., Harmonic Linearization of the Wien Bridge Oscillator 470
Karfunkel, J., A Transistorized Demonstration Set for Quantized Pulse Amplitude Modulation 324
Kay, R. H., A Reciprocal Time-Interval Display Using Transistor Circuits 543
Kay, R. H. (with W. J. Bannister), A Versatile Transistor Stimulator 793
Kirby, P. L., Fixed Resistors for Use at High Voltages 84
Kirby, P. L., The Non-Linearity of Fixed Resistors .. 722
Klepp, G. F. (with J. E. Brooke-Stewart), Improved Thermal Delay by New Circuit Principal .. 106
Knight, P. (with R. D. C. Thoday), The Power Gain of Arrays of Yagi Aerials 91
Kontos, J., Analysis of a Pulse Modulator 332
Kossoff, G. (with C. N. Liu and D. E. Robinson), A Video Logarithmic Amplifier with Quick Recovery 306
Kramer, C., A Low-Frequency Pseudo-Random Noise Generator 465

L

Lamb, W. G. P. (with M. L. Stones), Varistor Networks as Analogue Computing Elements 809
L'Archeveque, R. V. (with B. McA. Sayers), A Tunnel Diode Quantizer 574
L'Archeveque, R. V. (with B. McA. Sayers), The Design of Some Tunnel Diode Switching Circuits .. 652
Leela, B. S. (with R. Shankar), A Diode Phase-Sensitive Detector 681
Levinge, R. W., A Transfer Function Computer .. 218
Liu, C. N. (with G. Kossoff and D. E. Robinson), A Video Logarithmic Amplifier with Quick Recovery .. 306
Lock, E. B. (with A. R. Atkins), A Portable Electrocardio Transmitter and Receiver 806
Lotz, E. van der S., A Repetitive Electronic Switch for Use in Isotope Research 825
Lyden, A., Single and Matched Pair Transistor Choppers 186

M

Maclean, T. S. M., The Meander Line Aerial 667
Mandl, G. (with W. Ferch and B. Delisle Burns), A Neurophysiological Computer 20
Manley, B. W. (with J. Adams), The Channel Electron Multiplier 180
Mariani, L. (with D. Ciscato), Improved S.C.R. Firing Circuits 256
Marsh, D. J. (with J. W. Wilkins), The Harwell 2000 Series Linear Ratemeter/Integrator 456
Martin, J. D., Direct-Coupled Silicon Transistor Switching Circuits 732

Page

Matthews, M. D. (with E. A. Faulkner and G. W. Green), Improved Technique for Photoelectric Measurements .. 472
Mathieson, E., Shot Noise and the Measurement of the Electron Charge .. 718
Mildwater, J. (with R. Calvert), An Analogue Computer for Forecasting and Stock Control .. 660
Miles, D. J., A Precision Three-Phase 400c/s Generator 736
Miles, J. F. (with R. A. Hilbourne), The Metal-Oxide-Semiconductor Transistor .. 156
Millward, G. F. D. (with D. Chakraborty), A Nitrogen-cooled Degenerate Parametric Amplifier for a Radiometric Application .. 532
Ming, K. J., A Review of Methods of Post Deflexion Acceleration Used in Instrument Cathode-Ray Tubes .. 94
Molyneux, L., A Pulse Frequency Multiplier for Digital Phase Measurement .. 392
Moore, G. E. (with R. L. Farrel), An Automatic Co-Ordinate Measuring Equipment Using Moire Fringers .. 644
Morris, A. G., A Constant Volume Amplifier Covering a Wide Dynamic Range .. 502
Morris, D. J., Multi-Aperature Devices for All-Magnetic Logic Applications .. 512
Morris, D. J., The Laddic in All-Magnetic Logic Circuits .. 290
(Letters to the Editor) .. 475
Morris, N. M., An Iterative Method of Solving Multiple Mesh Problems .. 745

N

Nikiforuk, P. N. (with G. Squires), A Technique for Probability Density Function Measurement .. 316
(Letters to the Editor) .. 618, 829

O

Oakey, N. (with R. L. G. Gilbert), A Graphic-Analogue to Digital Convertor .. 98
Oliver, W., White Noise Loading of Multi-Channel Communication Systems .. 714
Opalinski, J., A Two-Transistor Stimulator for Physiological Purposes .. 670
Ophir, D., An S.C.R. Pre-Regulator for a Transistorized Power Supply .. 36
Orban, Gy. (with F. Szlavik), Sampling System for High Degree Stabilization of D.C. Motors .. 536

P

Paz, I. M., A High Voltage Pulse Generator .. 252
Pearcy, C., High Voltage Generation from Piezoelectric Ceramics .. 656
Perkins, D. J. (with G. O. Harries), A Light Operated Gradient Controller for Agricultural Drain Laying Machines .. 364
Philokyprou, G., A Delay Device and A.C. Logic Switch in the Resistor-Capacitor-Coupled-Transistor-Logic 601
Potok, M. H. N. (with A. W. Gooder), Operation of a Dekatron Valve Controlled by a Magnetic Field 318
Preston, B., A Microelectronic Frequency Divider with a Variable Division Ratio .. 240
Pugh, A., Zero Phase-Shift Multivibrators .. 24

R

Rea, D. P. (with B. V. Jayawant), A Tachometer using Circular Diffraction Gratings .. 297
Reynolds, J. A., A Crystal Controlled Stimulator .. 152
Richards, J. C. S., A D.C. Differential Amplifier Using Field Effect Transistors .. 598
Richards, J. C. S., Field Effect Transistors in D.C. Amplifiers .. 302
Ridler, P. F., Distortion in Feedback Oscillators .. 604
Roberts, P. B., Three-Channel Low Speed Counter for Measuring Alpha Particles .. 784
Robinson, D. E. (with C. N. Liu and G. Kossoff), A Video Logarithmic Amplifier with Quick Recovery 306
Rogers, D. W. W., Direct Reduction of a Multi-Mesh Circuit to a Four-Terminal Network .. 678
Ross, D. I. (with B. E. G. Goodger), A 12V d.c. to 230V a.c. Silicon Controlled Rectifier Invertor .. 589

S

Sach, C. I., A Pulse Height Measuring Unit .. 460
Sach, C. I., An Amplifier with Linear Voltage Controlled Gain .. 375
Sach, C. I., A Square Law Current Control System .. 580
Sayers, B. McA. (with R. V. L'Archeveque), A Tunnel Diode Quantizer .. 574

Page

Sayers, B. McA. (with R. V. L'Archeveque), The Design of Some Tunnel Diode Switching Circuits .. 652
Scollar, I., A Reversible Decade Counter with Symmetrical 1242 Coding .. 468
(Letters to the Editor) .. 686
Seal, C. L. (with S. L. Hurst), Frequency Control of Astable Transistor Multivibrator Circuits .. 182
(Letters to the Editor) .. 405
Sergent, T. (with E. C. Bell), Distortion and Power Output of Pulse Duration Modulated Amplifiers .. 540
(Letters to the Editor) .. 829
Sexton, M. C. (with A. A. Cremin), A Transistorized Ratio Amplifier Employing the Principle of Elapsed Time Computation .. 747
Shahzadi, B., Two Distinct Boundaries for Feedback Transistor Oscillators .. 32
(Letters to the Editor) .. 404, 547
Shankar, R. (with B. S. Leela), A Diode Phase-Sensitive Detector .. 681
Shepherd, B., A Transistor Ratemeter with 2μsec Resolution .. 437
Simpson, P. G., High Stability Low Frequency Band-Pass Filters .. 26
Smiljanic, G., A Stable Frequency D.C. to A.C. Convertor 610
Smiljanic, G., Operation of a Magnetically Coupled Multivibrator with Square BH Loop Cores .. 44
Smith, J. H., A Reversible Decade Counter with D.C. Logic Reset .. 41
Squires, G. (with P. N. Nikiforuk), A Technique for Probability Density Function Measurement .. 316
(Letters to the Editor) .. 618, 829
Stearman, G. H., Transistor Astable Multivibrators for Use with General Purpose Logic Elements .. 812
Steele, R. (with J. A. Effenberger), A Transistorized Integrator .. 230
Stones, M. L. (with W. G. P. Lamb), Varistor Networks as Analogue Computing Elements .. 809
Sutcliffe, H. (with J. S. Bowman), Automatic Gain Control for Noise .. 529
Swamy, M. N. S., A High Speed Tunnel Diode Decade Scaler .. 225
Swift, J., Microwave Tunnel-Diode Oscillators .. 508
Szlavik, F. (with Gy. Orban), Sampling System for High Degree Stabilization of D.C. Motors .. 536

T

Taylor, D. K., Dynamic Calibration of Electronic Integrator Gain .. 190
Taylor, D. K., Elimination of Division Circuits by Variable Time Scale .. 334
Thoday, R. D. C. (with P. Knight), The Power Gain of Arrays of Yagi Aerials .. 91
Trott, B. B., Curvature Attachment for a Surface Finish Instrument .. 388
Turk, S., Gain and Cut-off Frequency of a Transistor Amplifier Stage .. 609

W

Walton, B., Capacitors with Thin Oxide Film Dielectrics 384
Watson, A., A Staircase Function Generator .. 329
Webb, R. E., Field Effect Transistors for Biological Amplifiers .. 803
Wigan, E. R., A Self-Checking Cartesian A.C. Potentiometer for use in the 100c/s to 10kc/s Range .. 442
Wilkins, J. W. (with D. J. Marsh), The Harwell 2000 Series Linear Ratemeter/Integrator .. 456
Winn, M. M., A Transistor Tester .. 234
(Letters to the Editor) .. 618
Womack, G. J., Experiments in M.H.D. Power Generation 7
Wood, J., The Design of H. F. Baluns for High Powers 164
Wood, M. D., A Complementary-Pair Cascode for H.F. Amplification .. 110
Wyatt, D. J., An Input Transformer with Low Earth Leakage Currents .. 16

Y

Young, J. F., Counters and Shift Registers Using Static Switching Units .. 161
(Letters to the Editor) .. 404

Z

Zissos, D., A Step-by-Step Design of a Two-Way Binary Counter .. 311
(Letters to the Editor) .. 546
Zissos, D. (with G. W. Copperwhite), The Design of Minimal NOR/NAND Logical Circuits .. 592
(Letters to the Editor) .. 829
Zorkoczy, P., A Simple Automatic Extremum Seeker .. 178